

09/829,831

RECEIVED  
CENTRAL FAX CENTER  
SEP 18 2006**AMENDMENTS TO THE CLAIMS:**

This listing of claims will replace all prior versions, and listings, of claims in the application:

**LISTING OF CLAIMS**

1. (Currently Amended) A method for processing a speech signal comprising:  
extracting prosodic features from a speech signal;  
modeling the prosodic features to identify at least one speech endpoint;  
producing an endpoint signal corresponding to the occurrence of the at least one speech endpoint; and  
providing the endpoint signal and the speech signal to a speech processing recognition application to facilitate subsequent processing recognition of the speech signal.
2. (Original) The method of claim 1 wherein the extracting step comprises:  
processing pitch information within the speech signal.
3. (Original) The method of claim 2 wherein the extracting step further comprises:  
determining a duration pattern; and  
performing pause analysis.
4. (Original) The method of claim 2 wherein the processing step comprises:  
generating a pitch contour;  
producing a pitch movement model from the pitch contour; and  
extracting at least one pitch parameter from the pitch movement model.
5. (Original) The method of claim 4 wherein the at least one pitch parameter is a pitch movement slope.
6. (Original) The method of claim 4 wherein the at least one pitch parameter is a

09/829,831

difference between the pitch information in the speech signal and baseline pitch information.

7. (Original) The method of claim 1 wherein the producing step comprises generating a posterior probability regarding the at least one speech endpoint.

8. (Original) The method of claim 7 wherein the posterior probability regarding a plurality of speaker states including a probability that a speaker has completed an utterance, a probability that the speaker is pausing due to hesitation, or a probability that the speaker is talking fluently.

9. (Original) The method of claim 8 where the posterior probability is continuously updated as the speech signal is processed.

10. (Original) The method of claim 1 further comprising:  
executing a speech recognition routine for processing the speech signal using the at least one speech endpoint.

11. (Currently Amended) Apparatus for processing a speech signal comprising:  
a prosodic feature extractor for extracting prosodic features from the speech signal;  
a prosodic feature analyzer for modeling the prosodic features to identify at least one speech endpoint;  
an endpoint signal producer that produces an endpoint signal corresponding to the occurrence of the at least one speech endpoint; and  
means for providing the endpoint signal and the speech signal to a speech processing recognition application to facilitate subsequent processing recognition of the speech signal.

12. (Original) The apparatus of claim 11 wherein the prosodic feature extractor comprises:

09/829,831

a pitch processor for processing pitch information within the speech signal.

13. (Original) The apparatus of claim 12 wherein the prosodic feature extractor further comprises:

means for determining a duration pattern; and

means for performing pause analysis

14. (Original) The apparatus of claim 12 wherein the pitch processor comprises:

means for generating a pitch contour;

means for producing a pitch movement model from the pitch contour; and

means for extracting at least one pitch parameter from the pitch movement model.

15. (Original) The apparatus of claim 14 wherein the at least one pitch parameter is a pitch movement slope.

16. (Original) The apparatus of claim 14 wherein the at least one pitch parameter is a difference between the pitch information in the speech signal and baseline pitch information.

17. (Original) The apparatus of claim 11 wherein the endpoint signal producer comprises a posterior probability generator for generating a posterior probability regarding the at least one speech endpoint.

18. (Original) The apparatus of claim 17 wherein the posterior probability regarding a plurality of speaker states includes a probability that a speaker has completed an utterance, a probability that the speaker is pausing due to hesitation, or a probability that the speaker is talking fluently.

19. (Previously Presented) The apparatus of claim 18 where the posterior probability is continuously updated as the speech signal is processed.

09/829,831

20. (Previously Presented) The apparatus of claim 11 further comprising:  
a computer for executing a speech recognition routine for processing the speech signal using the at least one speech endpoint.
21. (Currently Amended) An electronic storage medium for storing a program that, when executed by a processor, causes a system to perform a method for processing a speech signal comprising:  
extracting prosodic features from a speech signal;  
modeling the prosodic features to identify at least one speech endpoint;  
producing an endpoint signal corresponding to the occurrence of the at least one speech endpoint; and  
providing the endpoint signal and the speech signal to a speech processing recognition application to facilitate subsequent processing recognition of the speech signal.
22. (Previously Presented) A method for processing a speech signal comprising:  
extracting prosodic features from a speech signal by processing pitch information within the speech signal;  
modeling the prosodic features to identify at least one speech endpoint;  
producing an endpoint signal corresponding to the occurrence of the at least one speech endpoint; and  
providing the endpoint signal and the speech signal to a speech processing application to facilitate subsequent processing of the speech signal.
23. (Previously Presented) Apparatus for processing a speech signal comprising:  
a prosodic feature extractor for extracting prosodic features from the speech signal by processing pitch information within the speech signal;  
a prosodic feature analyzer for modeling the prosodic features to identify at least one speech endpoint;  
an endpoint signal producer that produces an endpoint signal corresponding to

09/829,831

the occurrence of the at least one speech endpoint; and

means for providing the endpoint signal and the speech signal to a speech processing application to facilitate subsequent processing of the speech signal.

24. (Previously Presented) An electronic storage medium for storing a program that, when executed by a processor, causes a system to perform a method for processing a speech signal comprising:

extracting prosodic features from a speech signal by processing pitch information within the speech signal;

modeling the prosodic features to identify at least one speech endpoint;

producing an endpoint signal corresponding to the occurrence of the at least one speech endpoint; and

providing the endpoint signal and the speech signal to a speech processing application to facilitate subsequent processing of the speech signal.